AMENDMENTS TO THE CLAIMS

A complete listing of all claims in the application is provided below with the requested amendments marked.

1. (Previously presented) A wheel set for a rail vehicle comprising a pair of wheels connected by an axle and a vibration absorbing device comprising a mass resiliently mounted for circumferential oscillatory movement with respect to the wheel set and a spring element acting circumferentially between the mass and the wheel set, such that the mass can oscillate at the resonant frequency of torsional vibrations of the wheel/axle system and wherein damping of the oscillatory movement is provided by a friction determining surface between mutually contacting surfaces of the wheel set and the mass.

2. (Previously presented) The wheel set according to claim 1, wherein the vibration absorbing device is mounted on the wheel.

3. (Previously presented) The wheel set according to claim 1, wherein the mass of the vibration absorbing device comprises at least a segment of an annular ring concentrically mounted with respect to the axle.

4. (Previously presented) The wheel set according to claim 3, wherein the segment is mounted to the wheel by a spring element.

5. (Previously presented) The wheel set according to claim 4, wherein the wheel is provided with a bore and the spring element comprises a centering sleeve for insertion in the bore and a spring plate for engaging with the segment.

6. (Previously presented) The wheel set according to claim 4, wherein the wheel is provided with a bore and the segment is provided with a counter bore and the spring element comprises a spring sleeve which inserts into both the bore and the counter bore.

7. (Previously presented) The wheel set according to claim 5, wherein the spring sleeve includes a longitudinal slot, the width of which determines the maximum amplitude of oscillation of the segment with respect to the wheel.

8. (Previously presented) The wheel set according to claim 3, wherein the wheel comprises a flange and a pair of segments are mounted on opposite facing sides of the wheel and connected together through the flange to oscillate together.

9. (Previously presented) The wheel set according to claim 8, wherein the wheel is provided with a bore through the flange and the spring sleeve passes through the bore and inserts into counter bores formed in both segments.

10. (Previously presented) The wheel set according to claim 9, wherein the segments are connected together by a fastening element passing through the spring sleeve.

11. (Previously presented) The wheel set according to claim 10, wherein the fastening element comprises a compression sleeve and a tensioning bolt, the compression sleeve being of a length to support between the segments through the flange whereby on tensioning, a pre-stress of the bolt may be taken by the compression sleeve to reduce a contact force between the segments and the flange.

12. (Previously presented) The wheel set according to claim 3, in which the segment comprises a brake disk.

13. (Previously presented) The wheel set according to claim 6, in which the segment comprises a brake disk and at least one of either the bore or the counter bore is elliptical or oval and radially oriented to allow for thermal expansion of the brake disk.

14. (Previously presented) The wheel set according to claim 3, wherein the mass is mounted to the wheel adjacent to its outer circumference.

15. (Previously presented) The wheel set according to claim 1, wherein the vibration absorbing device comprises part of the wheel.

16. (Previously presented) The wheel set according to claim 15, wherein the mass of the vibration absorbing device is provided by a rim of the wheel which is resiliently mounted with respect to a remainder of the wheel.

17. (original) The wheel set according to claim 1, wherein the vibration absorbing device is mounted on the axle adjacent to the wheel.

18. (Previously presented) The wheel set according to claim 1, wherein a vibration absorbing device is mounted on or adjacent to both wheels.

19. (Previously presented) The wheel set according to claim 1, further comprising a drive engaged to cause rotation of the axle.

20. (Previously presented) The wheel set according to claim 19, wherein the drive engages the axle at or adjacent to a mid point thereof.

21. (Previously presented) The wheel set according to claim 19, further comprising a control system, the control system being adapted in use to register and control slip between the wheels and the rail.

22. (canceled)

23. (Previously presented) A method of preventing or reducing torsional vibrations in a wheel set of a rail vehicle comprising a pair of wheels connected by an axle, the method comprising

determining the resonant frequency of torsional vibrations of the wheel/axle system and resiliently mounting a mass on the wheel set using a spring element acting circumferentially between the wheel set and the mass and a friction determining surface between mutually contacting surfaces of the wheel set and the mass, the mass and its resilient mounting being selected to oscillate at or near that resonant frequency.

24. (canceled)

25. (Previously presented) A vibration absorbing device for reducing torsional vibrations in a rail vehicle wheel set comprising a pair of wheels connected by an axle, the vibration absorbing device comprising:

a mass mounted for circumferential oscillatory movement with respect to the wheel set;

a spring element acting circumferentially between the mass and the wheel set;

and a friction determining surface between mutually contacting surfaces of the wheel set and the mass for damping of the oscillatory movement such that the mass can oscillate at a resonant frequency of torsional vibrations of the wheel/axle system